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United States Patent [19]**Meyer et al.**[11] **Patent Number:** **5,609,909**[45] **Date of Patent:** **Mar. 11, 1997**[54] **PROLAMINE COATINGS FOR TASTE MASKING**[75] Inventors: **Glenn A. Meyer**, Waukegan, Ill.;
Terrence B. Mazer, Reynoldsburg, Ohio[73] Assignee: **Abbott Laboratories**, Abbott Park, Ill.[21] Appl. No.: **421,649**[22] Filed: **Apr. 13, 1995****Related U.S. Application Data**

[60] Division of Ser. No. 245,927, May 19, 1994, which is a continuation-in-part of Ser. No. 23,301, Feb. 26, 1993, abandoned, which is a continuation-in-part of Ser. No. 815,458, Dec. 31, 1991, abandoned.

[51] **Int. Cl.⁶** **A61K 9/16; A23L 1/305**[52] **U.S. Cl.** **427/2.14; 424/452; 427/2.15; 427/213.3; 426/96; 426/453; 514/962; 514/974**[58] **Field of Search** **427/2.15, 213.3, 427/214; 424/452, 477, 491, 499; 514/951, 962, 974; 426/96, 590, 453**[56] **References Cited****U.S. PATENT DOCUMENTS**

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[57]

ABSTRACT

Prolamine fractions of grain proteins, applied as a single coating in weight ratios of 5 to 100% relative to the active substance being coated, result in the production of a liquid suspension which effectively masks the taste of orally administered drugs which often are extremely bitter. The taste masking is stable over prolonged periods of storage time of the suspension. The prolamine coating does not restrict the immediate bioavailability of the active substance. Prolamine coating is effective in masking the taste of antibiotics, vitamins, dietary fiber, analgesics, enzymes and hormones. Zein, gliadin or a mixture thereof, particularly in combination with between 2.5 and 15% of a water insoluble vegetable source oil or a wax capable of plasticizing the prolamine fraction, when applied to particles of drugs or nutritional supplements, to an effective thickness of about 1 to about 35 micrometers, are particularly effective in preventing the release of the active substance from the encapsulated particle and also in masking the unpleasant taste of the coated active substance.

18 Claims, 3 Drawing Sheets